

ABSTRACT

A catheter assembly for delivering an endoprosthesis within a body lumen. A delivery catheter assembly is provided which includes a detachable sheath for removably securing an endoprosthesis, for example a stent, onto an expandable member, for example, a dilatation balloon. The detachable sheath is associated with the distal end portion of the catheter assembly having an expandable member therein, whereby inflation of the expandable member ruptures the detachable sheath, thereby exposing the stent for implantation into a body lumen. Alternatively, the detachable sheath may be inflated separately from the expandable member, and/or may be manually retracted from the stent. The detachable sheath prevents movement of the stent relative to the catheter assembly during deployment in a body lumen, such as a patient's vasculature, by covering the stent until the stent is positioned at a desired location within the body lumen. The catheter assembly is inserted into the vasculature and manipulated so that the stent is positioned proximate a desired location in the vasculature, such as at a lesion or stenosis in a coronary artery. The detachable sheath protects the stent and the expandable member while traversing the vasculature, and the sheath automatically retracts or is manually retracted prior to implanting the stent.